

FOOT CARE IN THE FIELD

FMST 0604

17 Dec 99

TERMINAL LEARNING OBJECTIVE:

1. Given a combat environment (day and night) and necessary FMST supplies and equipment, perform care of the feet per the references. (FMST.06.04)

ENABLING LEARNING OBJECTIVE:

1. Without the aid of reference materials and given a list of symptoms of foot disorders, select the correct prevention techniques, per the student handbook. (FMST.06.04a)
2. Without the aid of reference materials and given a list of foot disorder symptoms, select the appropriate treatment for the type of foot disorder, per the student handbook. (FMST.06.04b)
3. Without the aid of reference materials and given a list of boots, select the appropriate boot for specific environmental conditions, per the student handbook. (FMST.06.04c)
4. Without the aid of reference materials and given a list of test protocols for fitting boots, select the appropriate test protocol for determining proper boot size, per the student handbook. (FMST.06.04d)
5. When given a patient with foot blisters in a field environment and given the FMST MOLLE Medic Bag, perform foot blister care effectively, per the student handbook. (FMST.06.04e)

OUTLINE:

A. TYPES OF BOOTS

1. MATTERHORN MARINE INFANTRY COMBAT BOOT

- a. Standard issue for Marines and Navy personnel assigned to the Fleet Marine Force or graduating from Field Medical Service School.
- b. Leather with black nylon fabric on each side.
- c. Breathable, Gore-Tex Construction (waterproof)
- d. Outsole is non-marking, jet fuel and oil resistant.



Figure 1- Matterhorn Marine Infantry Combat Boot

2. JUNGLE BOOT

- a. Standard issue for Marines and Navy personnel assigned to the Fleet Marine Force or graduating from Field Medical Service School.
- b. Leather with green or black nylon fabric on each side
- c. Holes for drainage

- d. Steel insert in sole.



Figure 2 - Jungle Boot

3. VAPOR BARRIER BOOTS (“Mickey Mouse Boots”)

- a. Issued to personnel stationed in extremely cold climates.
- b. Black boots protect feet in wet cold up to -30 degrees F
- c. White boots protect feet in dry cold up to -60 degrees F
- d. Interior and exterior insulation



Figure 3 – Vapor Barrier Boots

5. HOT WEATHER TYPE III (DESERT BOOT)

- a. Issued to personnel stationed in extremely cold climates.
- b. Tan suede with tan nylon sides
- c. Rubberized top and no eyelets (to keep sand out)
- d. No steel shank which allows for cooler wear



Figure 4 - Hot Weather Type III

B. PROPER FITTING OF FOOT WEAR

1. FITTING OF BOOTS

- a. Criteria #1 - Determine the fit under the arch. There should be no wrinkles under the arch.
- b. Criteria #2 - Ball of foot rests on the widest part of the sole.

- c. Criteria #3 - Determine the width of the boot. No tightness or fullness of the leather.
- d. Criteria #4 - Determine the boot length. There should be 1/2 inch between the end of the longest toe and the end of the boot.

C. FITTING OF SOCKS

1. Proper fitting of socks is paramount to good foot care.
2. Improper fitting can lead to:
 - a. Blisters
 - b. Abrasions – “Hot Spots”
 - c. Poor sweat absorption
 - d. Poor feet circulation
3. Proper sock fitting guidelines:
 - a. Place socks on feet and stand with weight evenly distributed
 1. Socks should feel comfortable – i.e. No fullness and “not to tight”
 2. Socks should fit snugly on the foot without excess material over toes and heel
 - a. Excess material may bunch up and cause pressure points on the foot
 - b. Allow 3/8” shrinkage with washing
 - c. If a person opts to wear two pairs of socks, the outer pair should be 1/2 size larger to comfortably fit over the inner sock.

D. COMMONLY OCCURRING PROBLEMS

1. BLISTERS

- a. DEFINITION - A vesicle of the skin, containing watery matter or serum.
- b. CAUSES:
 1. Wet socks
 2. Improperly fitting boots and/or socks
 3. Frequent impacting on one or more areas of the foot
 4. Friction
- c. SIGNS / SYMPTOMS OF BLISTERS
 1. Vesicle of skin flap containing watery matter (serum)
 2. Mild edema and erythema
 3. Sloughing of tissue exposing subdermal tissue layer
 4. Localized discomfort and pain
- d. TREATMENT
 1. Small blisters usually need no treatment
 - a. Clean area with soap and water
 - b. Watch for increase in size and for signs and symptoms of infection
 2. Larger blisters that effect the way a person walks or functions
 - a. Wash the area around the blister with betadine solution or alcohol pad
 - b. Insert a 20–25 gauge needle near the margin of the blister 4-5 mm into the dome keeping the needle parallel to the skin, then withdraw the needle
 - c. Then apply gentle pressure to the blister dome, expressing the clear blister fluid

- d. Circumvent the affected area with absorbent adhesive bandage or adhesive tape (moleskin)
- e. DO NOT PUT ANY ADHESIVE DIRECTLY ON THE BLISTER ROOF.
- f. Dust entire foot with foot powder to lessen friction and prevent adhesive from adhering to the socks.
- h. Check blister periodically to ensure that it is drying properly.

2. SWEATY FEET

- a. DEFINITION - Excessive perspiration called hyperhidrosis on the sole of the foot and between the toes.
- b. CAUSES:
 - 1. In some cases it is related to mental stress and nervousness, especially in adolescents and young adults
 - 2. Systemic diseases such as anemia and hyperthyroidism may be associated with hyperhidrosis
- c. SIGNS / SYMPTOMS OF SWEATY FEET
 - 1. The skin between the toes usually becomes white and macerated.
 - 2. The skin rubs off easily and the foot is prone to abrasions.
- d. TREATMENT
 - 1. Change socks frequently
 - 2. Dry feet frequently
 - 2. Apply an antiperspirant preparation containing 15 - 25% aluminum chloride
 - 3. Use an absorbent foot powder

3. ATHLETES FOOT (Tinea pedis)

- a. DEFINITION – An infection of the foot caused by a fungus which predisposes the foot to sluffing of the skin.
- b. CAUSES:
 - 1. Sweaty feet and wet socks
 - 2. Contact with contaminated footwear and floors
 - 3. Poor hygiene
- c. SIGNS / SYMPTOMS OF ATHLETES FOOT
 - 1. Itching between the toes
 - 2. Red, raw-looking skin, which is often itchy
 - 3. Skin that flakes, peels or cracks
 - 4. Sore, purulent, weeping rash
- d. TREATMENT
 - 1. Change socks regularly
 - 2. Never wear a pair of boots for more than 24 hours in a row. This will allow the boots to dry.
 - 3. Apply anti-fungal foot powder daily for work hours (DAY) – i.e. Tolnaftate
 - 4. Apply anti-fungal ointment daily at rest hours (NIGHT) – i.e. Mycelex Cream
 - 5. If the patient fails to respond to treatment, refer patient to Medical Officer

4. INGROWN TOENAILS

- a. DEFINITION - The nail (often the big toe nail) grows into the skin, down the sides of the nail, becoming embedded as the nail grows,

which can cause severe pain, bleeding, and a toenail infection.

b. CAUSES:

1. The most common cause is cutting your toenails incorrectly. Nails cut too short or down the sides may leave a sharp piece of nail which pierces the groove as the nail grows.
2. Trauma to the nail plate or toe
3. Improperly fitted footwear – especially shoes too small
4. Abnormally shaped nail plate
5. Other toenail deformities (e.g. excessively thick nail plate)

c. SIGNS / SYMPTOMS OF INGROWN TOENAILS

1. Pain along the margin(s) of the toenail
2. Aggravated by wearing shoes, particularly those with narrow toes
3. May be sensitive to any pressure, even the weight of the bed clothes
4. There may be signs of infection
5. There may be drainage of pus, or a watery discharge tinged with blood

d. TREATMENT

1. Trim a small spicule of nail to relieve the pressure. Callus (dead skin) may have accumulated in the nail groove, which needs to be removed.
2. Elevate the end of the nail plate to prevent impingement on the soft tissues.
3. Surgically correct a chronic ingrown toenail at the BAS.
4. Completely remove a deformed toenail so it will not grow back.

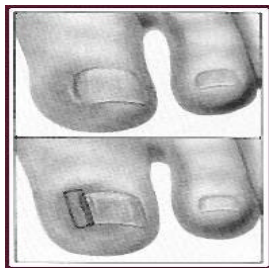


Figure 5 – Ingrown Toe Nail

5. CORNS, CALLUSES, AND BUNIONS

a. DEFINITION - A thickening of the surface layer of the skin in response to pressure. Usually form on the toes, where the bone is prominent and presses the skin against the shoe, ground, or other bones.

b. CAUSES:

1. Tight fitting shoes
2. Deformed and crooked toes
3. Tight socks
4. Seam or stitch inside the shoe which rubs against the toe
5. Sometimes a shoe which is too loose, with the foot sliding forward with each step
6. Prolonged walking on a downward slope

c. SIGNS / SYMPTOMS OF CORNS, CALLUSES, AND BUNIONS

1. A hard growth on the skin of the toes.
2. Pain on direct pressure against the corn.
3. Sometimes redness and swelling around the corn, with severe discomfort.
4. Increased discomfort in tight fitting shoes.
5. More common in women than men

d. TREATMENT

1. Carefully debride (pare down) the corn and any deep seated core it may have.
It should be stressed that this provides only temporary relief, if the pressure continues after treatment.
2. Apply various pads and devices to the toes to relieve pressure (mole skin)
3. Find the cause and alleviate - i.e. fix improperly fitted boots
4. In extreme case refer to Medical Officer

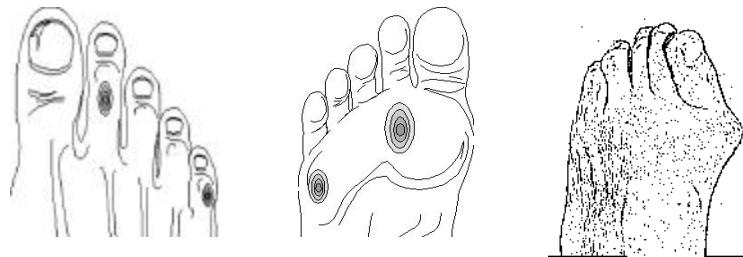


Figure 6 – From left to right Corn, Callus and Bunion

E. PROPHYLACTIC FOOT CARE

1. BEFORE MARCHES

- a. Educate troops about proper foot care and wear
- b. Keep feet clean and dry
- c. Wear clean, dry, un-mended, well fitting socks
- d. Use foot powder
- e. Cut toenails on a regular basis (every two or three weeks)
- f. Early and immediate attention to pain around toenails

2. DURING REST PERIODS

- a. Lie with feet elevated at rest points
- b. If time permits, massage the feet, apply powder, change to dry socks and treat blisters.
- c. Relief from swelling feet can be obtained by a slight loosening of the boot laces where they cross the arch.

3. AFTER MARCHES

- a. At all times EARLY ATTENTION IS ESSENTIAL. As soon as any discomfort is felt, take corrective action.
- b. Treat blisters, abrasions, corns, and calluses if they have occurred.
- c. If red, swollen, tender skin develops along the edges of the foot, the foot requires aeration, elevation, rest, and as a rule, wider foot wear.
- d. A daily foot bath is important. In the field, cool water seems to relieve the sensation of

heat and irritation.

REFERENCE (S):

1. Foot Care Direct
2. Foot Talk